BACKGROUND OPERATION FOR MEMORY CELLS

ABSTRACT OF THE DISCLOSURE

A technique to perform an operation (*e.g.*, erase, program, or read) on memory cells (105) is to apply an operating voltage dynamically to the gates (111, 113) of the memory cells, rather than a continuous operating voltage. This reduces the power consumed during the operation. Dynamic operation or background operation such as background erase also permits other operations, such as read, program, or erase, to occur while the selected memory cells are operated on. This improves the operational speed of an integrated circuit using dynamic operation compared to a continuous operation. In an embodiment for background erase, the erase gates are charged to the erase voltage using a charge pump (204, 208). The pump is then turned off (212), and the erase gates remain at the erase voltage dynamically (216). The erase voltage at the erase gates will be periodically checked and refreshed as needed until the memory cells are fully erased (224). While the charge pump is off and the erase voltage is dynamically held at the erase dates, other operations, possibly on other memory cells, may be performed (220).